

⑤ Int. Cl.<sup>5</sup>E 04 F 15/02  
15/04  
15/16

識別記号

庁内整理番号

G 7805-2E  
B 7805-2E  
F 7805-2E  
E 7805-2E

⑬ 公開 平成3年(1991)7月23日

審査請求 未請求 請求項の数 1 (全4頁)

⑭ 発明の名称 置敷き床材

⑯ 特 願 平1-306911

⑰ 出 願 平1(1989)11月27日

⑱ 発 明 者 林 守 男 大阪府門真市大字門真1048番地 松下電工株式会社内  
 ⑱ 発 明 者 山 崎 清 好 大阪府門真市大字門真1048番地 松下電工株式会社内  
 ⑱ 発 明 者 峰 岸 康 之 大阪府門真市大字門真1048番地 松下電工株式会社内  
 ⑲ 出 願 人 松下電工株式会社 大阪府門真市大字門真1048番地  
 ⑳ 代 理 人 弁理士 石田 長七 外2名

## 明 細 書

## 1. 発明の名称

置敷き床材

## 2. 特許請求の範囲

(1) 床下地面上に置敷きされる置敷き床材であつて、柔軟性を有するシート状の合成樹脂成形品製の基材の表層に薄い木質化粧板が積層され、基材の一端端に嵌合突部が形成され、他端端に嵌合突部が嵌合することができる嵌合凹所が形成され、嵌合突部と嵌合凹所との一方に抜止め突部が形成され、他方に抜止め突部が係入して抜止めを図る抜止め凹所が形成されて成ることを特徴とする置敷き床材。

## 3. 発明の詳細な説明

## 〔産業上の利用分野〕

本発明は、モルタル、コンクリート等により仕上げられた床下地上に直接に敷設される置敷き床材に関し、詳しくは木質の表面を有しながら、木質系における反りを回避し、扱い性も付与し、か

かる構成のものを製作容易に得るとともに、その施工において抜止めを行う抜止め構成も容易に形成しようとする技術に係るものである。

## 〔従来の技術〕

従来から、モルタル、コンクリート等により仕上げられた床下地上に敷設される木質床材は知られている。例えば、第4図に示す如く、木質合板のような木質基板1aの裏面に複数個の溝bを並設し、同裏面にクッション材cを貼着してなる木質床材Aaが知られている。ところでこのような木質床材Aaは、床下地上に接着或いは釘打ち施工等により固定されて敷設施工されるものであり、溝bとクッション材cによって、防音効果が得られるものである。しかしながら、このような木質床材Aaにおいては、溝bが設けられているものの、木質基板1aには屈曲柔軟性がなく、充分な屈曲柔軟性を得るために、溝bの並設個数を増やしたり或いは溝bの深さ寸法を深く形成した場合には、溝cに対応して木質化粧板2の表面に亀裂が発生し易く、強度及び表面意匠上問題となるものであつ

た。それ故に、木質床材A<sub>1</sub>においては、充分な屈曲柔軟性がないままに、床下地上に施工されており、床下地への馴染みが悪いために、床下地上に接着或は釘打ち施工等により固定して、強制的に床下地に馴染ませて施工していた。この場合、施工に接着或は釘打ち等の作業が伴って、敷設施工が面倒であるとともに、木質床材A<sub>1</sub>の取り替えが極めて困難となるものであった。加えて、木質基板1<sub>1</sub>に多数本の溝bの加工を精度良く行うのが笨重となり、その製作面及び機能面において問題があった。しかも第5図に示すように、木質基材1<sub>1</sub>の一端端に嵌合突部3<sub>1</sub>を形成し、他側端に嵌合凹所4<sub>1</sub>を形成して、両者を嵌合させて木質床材A<sub>1</sub>、A<sub>1</sub>同士を接続するのであるが、かかる接続に際しては、嵌合凹所4<sub>1</sub>に接着剤dを充填して抜止めを図るのである。ところがこのように接着剤dを充填するものにおいては、その嵌合時に接着剤dがはみ出し、これの拭き取り作業を要する等の問題がある。

[発明が解決しようとする課題]

れて成ることを特徴とするものである。

[作用]

このように、柔軟性を有するシート状の基材1の表層に薄い木質化粧板2が積層されることによって、柔軟性を有するシート状の基材1には木質化粧板のような反りが生じることがなく、基材1には柔軟性によって撓み性を付与し、床下地面に馴染むようにし、床下地の凹凸をより吸収し、床下地面によりぴったりと接することで、置敷き床材Aの滑りを抑えることとなって、床下地上に直接に接着或は釘打ち等の作業を行うことなく簡単に敷設(直張)施工が行えるようになり、かかる柔軟性を有するシート状の基材1にて振動の伝播を抑制し、防音性も高め、溝加工を回避して、その生産性を高め、そして成形品の基材1とする場合には、樹脂の選択にて寸法の安定化を図りやすく、隣接のものとの結合を図る結合部の製作も容易になり、コストダウンも図れ、種々の付加価値を加えることができ、しかも基材1の一端端に嵌合突部3が形成され、他側端に嵌合凹部4が嵌合することが

本発明は、上記従来の技術における欠点を解消するために発明されたものであり、その課題は、基材に充分な屈曲柔軟性があり、床下地への馴染みが良く、しかも、木質化粧板の表面側には亀裂が発生し難くて、強度面或は表面意匠上の問題がなく、床下地上に接着或は釘打ち等の作業を伴うことなく敷設施工でき、かつ振動抑制及び防音を充分に充分に行うことができ、その生産も大巾に高めることができ、かつ接続に際しても容易迅速に行うことができる置敷き床材を提供することである。

[課題を解決するための手段]

本発明の置敷き床材は、床下地面上に置敷きされる置敷き床材であって、柔軟性を有するシート状の基材1の表層に薄い木質化粧板2が積層され、基材1の一端端に嵌合突部3が形成され、他側端に嵌合凹部4が嵌合することができる嵌合凹所4が形成され、嵌合突部3と嵌合凹所4との一方に抜止め突部3<sub>1</sub>が形成され、他方に抜止め凹部3<sub>2</sub>が係入して抜止めを図る抜止め凹所4<sub>1</sub>が形成さ

できる嵌合凹所4<sub>1</sub>が形成され、嵌合突部3と嵌合凹所4との一方に抜止め突部3<sub>1</sub>が形成され、他方に抜止め凹部3<sub>2</sub>が係入して抜止めを図る抜止め凹所4<sub>1</sub>が形成されることによって、嵌合突部3を嵌合凹所4に嵌合させるとともに抜止め突部3<sub>1</sub>を抜止め凹所4<sub>1</sub>に係合させることで、接着剤の使用を回避して、置敷き床材A、A同士の接続を容易迅速に行え、置敷き施工に有利になし、かつかかる接続のための構成も容易に得られるようにしたものである。

[実施例]

以下本発明の実施例を図面に基づいて詳述する。

木材を薄くスライスして木目を有する突板(スライス単板)のような木質化粧板2が、合成樹脂製で柔軟性があり、シート状の基材1の表面に積層しており、その基材1の一端端には嵌合突部3が形成され、他側端には嵌合凹部4が形成されている。このような嵌合突部3及び嵌合凹部4の形成は、基材1の成形時に同時に行なわれる。そして木質化粧板2は、0.25mm〜0.6mm程度の厚

点を解消  
果敢は、  
也への願  
望には最  
上の問題  
作業を伴  
及び防音  
能も大巾  
も容易迅  
すること

置敷きさ  
らシート  
質層され、  
他側端  
部 4  
りー  
突部 3  
形成さ

3と嵌合  
れ、他  
る抜止  
合突部  
止め突部  
接着剤  
の接続  
なし、か  
けるよう

詳述する。  
基板(ス  
成樹脂  
面に積  
突部 3  
とされて  
4の形  
。そし  
度厚

そのスライス単板に1mm~2mm厚さ程度の乾式の  
ラワン単板を裏打ちしたものや、1mm~3mm厚さ  
程度のスライス単板のみのものがあり、このよう  
な木質化粧板2を合成樹脂製の成形品製の基材1  
にその成形時に積層接着するか、別途に接着剤に  
て接着する等するものである。そして基材1は例  
えば金属粉末を混入する等した遮音性及び防音性  
の高い遮音シートを使用するとよい。

このように、柔軟性を有するシート状の基材1  
の表層に薄い木質化粧板2が積層されることで、  
柔軟性を有するシート状の基材1には木質基板の  
ような反りが生じることがなくて、柔軟性によっ  
て撓み性が得られて、床下地面に良好に馴染むの  
であり、床下地の凹凸をより吸収し、床下地面に  
よりぴったりと接するのであり、しかして置敷き  
床材Aの滑りを抑えることとなって、床下地上に  
直接に接着或は釘打ち等の作業を行うことなく簡  
単に敷設(直張)施工が行えるのである。そして柔  
軟性を有するシート状の基材1にて振動の伝播を  
抑制するのであり、又、防音性も高めるのである。

向は嵌合突部3と嵌合凹所4との嵌合方向を示し  
ている。

#### 〔発明の効果〕

以上要するに本発明は、柔軟性を有するシート  
状の基材の表層に薄い木質化粧板が積層される故、  
柔軟性を有するシート状の基材には木質基板のよ  
うな反りが生じることがなく、基材には柔軟性によ  
って撓み性を付与し、床下地面に馴染むようにし、  
床下地の凹凸をより吸収し、床下地面により  
ぴったりと接することで、置敷き床材の滑りを抑  
えることとなって、床下地上に直接に接着或は釘  
打ち等の作業を行うことなく簡単に敷設(直張)施  
工が行えるようにでき、かつ柔軟性を有するシー  
ト状の基材にて振動の伝播を抑制することもでき、  
防音性も高めることもでき、溝加工を回避して、  
その生産性を高め、そして成形品の基材とする場  
合には、樹脂の選択にて寸法の安定化を図りやす  
く、隣接のものとの結合を図る結合部の製作も容  
易に行え、コストダウンも図れ、種々の付加価値  
を加えることができ、しかも基材の一側端に嵌合

そして溝加工を回避して、その生産性を高めるの  
である。又、合成樹脂製の成形品の基材1故、樹  
脂の選択にて寸法の安定化を図りやすく、隣接の  
ものとの結合を図る嵌合突部3及び嵌合凹所4の  
ような結合部の製作も容易に行えるのである。

そして、嵌合突部3には第1図に示すように、  
抜止め突部3aが形成されるのであり、抜止め凹  
所4aには抜止め突部3aが係入して抜止めを図る  
抜止め凹所4aが形成されている。しかして、嵌  
合突部3を嵌合凹所4に嵌合させるとともに抜止  
め突部3aを抜止め凹所4aに係合させることで、  
接着剤の使用を回避して、置敷き床材A、A同士  
の接続を容易迅速に行え、置敷き施工に有利にな  
し、かつかかる接続のための構成も容易に得られ  
るのである。そして接続に際しては、嵌合突部3  
の嵌合に伴って嵌合凹所4の下片4bが下方に弾  
性変形し、嵌合後は下片4bが復元して、確実な  
抜止めを図っている。そして第2図及び第3図の  
矢印ロ方向へのスライドにて、木口方向に移動さ  
せ、置敷き施工が行なわれる。第3図の矢印イ方

向が形成され、他側端に嵌合突部が嵌合するこ  
とができる嵌合凹所が形成され、嵌合突部と嵌合  
凹所との一方に抜止め突部が形成され、他方に抜  
止め突部が係入して抜止めを図る抜止め凹所が形  
成されているから、嵌合突部を嵌合凹所に嵌合さ  
せるとともに抜止め突部を抜止め凹所に係合させ  
ることで、接着剤の使用を回避して、置敷き床材  
同士の接続を容易迅速に行え、置敷き施工に有利  
になし、かつかかる接続のための構成も容易に得  
られるという利点がある。

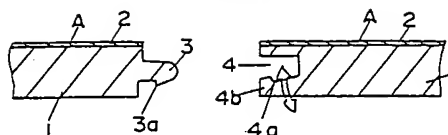
#### 4. 図面の簡単な説明

第1図は本発明の一実施例の接続作用を示す断  
面図、第2図は同上の接続状態の断面図、第3図  
は同上の施工形態を示す平面図、第4図は従来例  
の断面図、第5図は従来例の接続作用を示す斜視  
図であり、1は基材、2は木質化粧板、3は嵌合  
突部、3aは抜止め突部、4は嵌合凹所、4aは抜  
止め凹所である。

代理人 弁理士 石 田 長 七

- 1 基材
- 2 木質化粧板
- 3 嵌合突起部
- 3a 嵌止の突起部
- 4 嵌合凹所
- 4a 嵌止の凹所

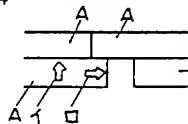
第1図



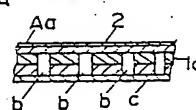
第2図



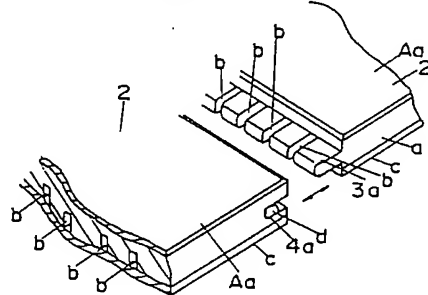
第3図



第4図



第5図



Translation of Reference

Jpn. Pat. KOKAI Publication No. 3-169967  
Filing No.: 1-306911  
KOKAI Date: July 23, 1991

-----

## 1. Title of the Invention

FLOORING MEMBER TO BE LAID OUT

## 2. What is claimed is:

(1) A flooring member to be laid out on an underfloor base, characterized in that: a thin woody decorative panel is laminated on the surface of a flexible sheet-like base member made of a synthetic resin molding; fitting projections are formed on one side of the base member, while fitting concave portions into which the fitting projections can be fitted are formed on the other side; and disengagement-preventing projections are provided for either the fitting projections or the fitting concave portions, while disengagement-preventing concave portions into which the disengagement-preventing projections are inserted for preventing disengagement are provided for the other ones.

## 3. Detailed Description of the Invention

[Field of Industrial Use]

The present invention relates to a flooring member to be laid out directly on an underfloor base which is finished by use of mortar, concrete, or the like. More

specifically, the present invention is directed to a technique for enabling easy fabrication of a flooring member which has a woody surface but is flexible and prevented from warping, and also to a technique for enabling easy fabrication of a disengagement-preventing structure used when the flooring member is laid out.

[Prior Art]

Conventionally, woody flooring members to be laid out on an underfloor base finished by use of mortar, concrete, or the like, have been known in the art. For example, a woody flooring member Aa, such as that shown in FIG. 4, has been known in the art. As shown, the woody flooring member Aa comprises a woody base plate 1a, such as a grain finish plywood, and a plurality of grooves b formed in the reverse surface of the woody base plate 1a in such a manner that they extend in parallel to one another. A cushion member c is pasted to the reverse surface of the woody base plate 1a. This type of woody flooring member Aa is laid out on an underfloor base and is made immovable by use of an adhesive or by nailing. The grooves b and the cushion member c produce a soundproof effect. Despite the grooves b, however, this type of woody flooring member Aa is disadvantageous in that the woody base plate 1a does not have flexure and plasticity. In order to provide this characteristic for the woody base plate 1a, a larger number

of grooves b have to be formed, or the grooves b must be deeper. If this is done, however, a woody decorative panel 2 is likely to crack, so that the provision of such grooves c becomes a problem from the viewpoints of the strength and the surface design. In practice, therefore, the woody flooring member Aa is laid out on the underfloor base without providing sufficient flexure and plasticity. Since the woody flooring member Aa is not compatible with the underfloor base, it is fixed to the underfloor base by use of an adhesive or by nailing, so as to forcibly provide the compatibility. In this case, the layout operation is accompanied by the operation for adhesive bonding or nailing and is thus troublesome. In addition, once the woody flooring member Aa is laid out, it cannot be easily replaced with another. Further, since a large number of grooves b cannot be formed in the woody base plate 1a with high precision, the woody base plate 1a has problems from the standpoints of fabrication and function as well. As shown in FIG. 5, woody flooring members Aa and Aa are connected together by fitting the fitting projections 3a formed on one side of one woody base member 1a into the fitting concave portions 4a formed on the other side of the other woody base member 1a, and when this connection is performed, the fitting concave portions 4a are filled with an adhesive d, for the prevention of disengagement. Where

the adhesive d is used, it may come out of the concave portions at the time of the fitting operation, and the residual adhesive has to be wiped away.

[Problems To Be Solved by the Invention]

The present invention has been made in an effort to solve the problems described above, and the object of the present invention is to provide a flooring member which is to be laid out and which enables: the base member has sufficient flexure and plasticity and has compatibility with the underfloor base, the surface of the woody decorative panel hardly cracks, the problems related to the strength and the surface design do not occur, the layout operation is performed on the underfloor base without performing adhesive bonding or nailing, the suppression of vibration and the insulation of sound are performed, a remarkably improved productivity is ensured, and the connecting operation can be easily performed in a short time.

[Means for Solving the Problems]

The present invention provides a flooring member which is to be laid out on an underfloor base and which is characterized in that: a thin woody decorative panel 2 is laminated on the surface of a flexible sheet-like base member 1; fitting projections 3 are formed on one side of the base member 1; fitting concave portions 4 into which



the fitting projections 3 can be fitted are formed on the other side; disengagement-preventing projections 3a are provided for either the fitting projections 3 or the fitting concave portions 4; and disengagement-preventing concave portions 4a into which the disengagement-preventing projections 3a are inserted for preventing disengagement are provided for the other ones.

[Operation]

As described above, a thin woody decorative panel 2 is laminated on the surface of a flexible sheet-like base member 1. With this structure, the flexible sheet-like base member 1 does not warp, unlike the woody base plate. The base member 1 is provided with plasticity and flexure, so that it has compatibility with the underfloor base. Since the base member 1 absorbs the roughness of the underfloor base and can be set in tight contact with the underfloor base, the flooring member A is prevented from sliding. Accordingly, the flooring member A can be easily laid out directly on the underfloor base without the necessity of performing adhesive bonding or nailing. Due to the flexible sheet-like base member 1, the propagation of vibration can be suppressed, and the sound insulation effect is improved. Since special measures need not be taken for the grooves, the productivity is enhanced. Where the base member 1 is made of a molding, the desired

dimensions can be attained by selectively using a suitable resin, and the coupling sections used for coupling adjacent flooring members can be easily fabricated. Hence, the cost reduction can be attained, and a variety of values can be added. In addition, the fitting projections 3 are formed on one side of the base member 1, while the fitting concave portions 4 into which the fitting projections 3 can be fitted are formed on the other side of the base member 1. Moreover, disengagement-preventing projections 3a are provided for either the fitting projections 3 or the fitting concave portions 4, while disengagement-preventing concave portions 4a into which the disengagement-preventing projections 3a are inserted for preventing disengagement are provided for the other ones. With this structure, when the fitting projections 3 are fitted into the fitting concave portions 4, and the disengagement-preventing projections 3a are inserted into the disengagement-preventing concave portions 4a, the flooring members A, A can be coupled together easily and in a short time, with no need to use an adhesive. Further, the structure for this coupling can be easily attained.

[Embodiment]

An embodiment of the preset invention will now be described in detail with reference to the accompanying drawings.

A woody decorative panel 2, which is like a sliced veneer obtained by slicing wood and having a grain pattern, is laminated on the surface of a sheet-like base member 1 which is flexible and formed of a synthetic resin. Fitting projections 3 are formed on one side of the base member 1, while fitting concave portions 4 are formed on the other side. The fitting projections 3 and the fitting concave portions 4 are formed simultaneous with the fabrication of the base member 1. The woody decorative panel 2 may be a sliced veneer which is about 0.25-0.6 mm in thickness and which is lined with a dry lauan veneer of about 1 mm to 2 mm. Alternatively, the woody decorative panel 2 may be a sliced veneer which is about 1-3 mm in thickness. This woody decorative panel 2 is laminated and adhered to the base member 1, which is made of a synthetic resin molding. The woody decorative panel 2 is laminated and joined when the base member 1 is molded, or adhered thereto independently of the molding operation of the base member 1. As the base member 1, it is preferable to employ a sound-insulating sheet which contains metallic powder, for example, and which is improved in sound isolation or sound insulation characteristics.

As described above, the thin woody decorative panel 2 is laminated on the surface of the flexible sheet-like base member 1. With this structure, the flexible sheet-like

base member 1 does not warp unlike the wooden base plate. Due to the flexibility, the base member 1 is reliably compatible with the surface of the underfloor base. Since it absorbs the roughness of the underfloor base and can be set in tight contact with the underfloor base, the flooring member A is prevented from sliding. Accordingly, the flooring member A can be easily laid out directly on the underfloor base without the necessity of performing adhesive bonding or nailing. Due to the flexible sheet-like base member 1, the propagation of vibration can be suppressed, and the sound insulation effect is improved. Since special measures need not be taken for the grooves, the productivity is enhanced. In addition, since the base member 1 is made of a molding, the desired dimensions can be attained by selectively using a suitable resin, and the coupling sections (such as the fitting projections 3 and fitting concave portions 4) used for coupling adjacent flooring members can be easily fabricated.

As shown in FIG. 1, the disengagement-preventing projections 3a are provided for the fitting projections 3, and the disengagement-preventing concave portions 4a into which the disengagement-preventing projections 3a are inserted for preventing disengagement are provided for the disengagement-preventing concave portions 4a. With this structure, when the fitting projections 3 are fitted into

the fitting concave portions 4, and the disengagement-preventing projections 3a are engaged with the disengagement-preventing concave portions 4a, the flooring members A, A can be coupled together easily and in a short time, with no need to use an adhesive. In this manner, the flooring members A, A can be easily laid out, and the structure for coupling them can be easily attained. At the time of coupling, the lower piece 4b of the fitting concave portion 4 is elastically deformed downward in accordance with the fitting movement of the fitting projection 3. After the fitting projection 3 is completely fitted in, the lower piece 4b moves back to the original position, thus ensuring reliable prevention of disengagement. The flooring members are moved in the cut-end direction for layout by sliding them in the direction of arrow (□) in FIGS. 2 and 3. In FIG. 3, the direction indicated by arrow (△) represents the fitting direction in which the fitting projection 3 is fitted into the fitting concave portion 4.

[Advantages of the Invention]

As can be seen from the above, according to the present invention, a thin woody decorative panel is laminated on the surface of a flexible sheet-like base member. With this structure, the flexible sheet-like base member does not warp, unlike the woody base plate. The base member is provided with plasticity and flexure, so

that it has compatibility with the underfloor base. Since the base member absorbs the roughness of the underfloor base and can be set in tight contact with the underfloor base, the flooring member is prevented from sliding. Accordingly, the flooring member can be easily laid out directly (directly layout) on the underfloor base without the necessity of performing adhesive bonding or nailing. Due to the flexible sheet-like base member, the propagation of vibration can be suppressed, and the sound insulation effect is improved. Since special measures need not be taken for the grooves, the productivity is enhanced. Where the base member is made of a molding, the desired dimensions can be attained by selectively using a suitable resin, and the coupling sections used for coupling adjacent flooring members can be easily fabricated. Hence, the cost reduction can be attained, and a variety of values can be added. In addition, the fitting projections are formed on one side of the base member, while the fitting concave portions into which the fitting projections can be fitted are formed on the other side of the base member. Moreover, disengagement-preventing projections are provided for either the fitting projections or the fitting concave portions, while disengagement-preventing concave portions into which the disengagement-preventing projections are inserted for preventing disengagement are provided for the

other ones. With this structure, when the fitting projections are fitted into the fitting concave portions, and the disengagement-preventing projections are engaged with the disengagement-preventing concave portions, the flooring members can be coupled together easily and in a short time, with no need to use an adhesive. In this manner, the flooring members can be easily laid out, and the structure for coupling them can be easily attained.

#### 4. Brief Description of the Drawings

FIG. 1 is a sectional view showing a coupling operation according to one embodiment of the present invention. FIG. 2 is a sectional view showing the coupled state according to the embodiment. FIG. 3 is a plan view showing the layout manner according to the embodiment. FIG. 4 is a sectional view showing the prior art. FIG. 5 is a perspective view showing the coupling operation according to the prior art. Numeral 1 denotes a base member, 2 denotes a woody decorative plate, 3 denotes a fitting projection, 3a denotes a disengagement-preventing projection, 4 denotes a fitting concave portion, and 4a denotes a disengagement-preventing concave portion.

## Translation of Reference

Jpn. Pat. KOKAI Publication No. 3-169967

Filing No.: 1-306911

KOKAI Date: July 23, 1991

-----

### 1. Title of the Invention

FLOORING MEMBER TO BE LAID OUT

### 2. What is claimed is:

(1) A flooring member to be laid out on an underfloor base, characterized in that: a thin woody decorative panel is laminated on the surface of a flexible sheet-like base member made of a synthetic resin molding; fitting projections are formed on one side of the base member, while fitting concave portions into which the fitting projections can be fitted are formed on the other side; and disengagement-preventing projections are provided for either the fitting projections or the fitting concave portions, while disengagement-preventing concave portions into which the disengagement-preventing projections are inserted for preventing disengagement are provided for the other ones.

### 3. Detailed Description of the Invention

[Field of Industrial Use]

The present invention relates to a flooring member to be laid out directly on an underfloor base which is finished by use of mortar, concrete, or the like. More



specifically, the present invention is directed to a technique for enabling easy fabrication of a flooring member which has a woody surface but is flexible and prevented from warping; and also to a technique for enabling easy fabrication of a disengagement-preventing structure used when the flooring member is laid out.

[Prior Art]

Conventionally, woody flooring members to be laid out on an underfloor base finished by use of mortar, concrete, or the like, have been known in the art. For example, a woody flooring member Aa, such as that shown in FIG. 4, has been known in the art. As shown, the woody flooring member Aa comprises a woody base plate 1a, such as a grain finish plywood, and a plurality of grooves b formed in the reverse surface of the woody base plate 1a in such a manner that they extend in parallel to one another. A cushion member c is pasted to the reverse surface of the woody base plate 1a. This type of woody flooring member Aa is laid out on an underfloor base and is made immovable by use of an adhesive or by nailing. The grooves b and the cushion member c produce a soundproof effect. Despite the grooves b, however, this type of woody flooring member Aa is disadvantageous in that the woody base plate 1a does not have flexure and plasticity. In order to provide this characteristic for the woody base plate 1a, a larger number

of grooves b have to be formed, or the grooves b must be deeper. If this is done, however, a woody decorative panel 2 is likely to crack, so that the provision of such grooves c becomes a problem from the viewpoints of the strength and the surface design. In practice, therefore, the woody flooring member Aa is laid out on the underfloor base without providing sufficient flexure and plasticity. Since the woody flooring member Aa is not compatible with the underfloor base, it is fixed to the underfloor base by use of an adhesive or by nailing, so as to forcibly provide the compatibility. In this case, the layout operation is accompanied by the operation for adhesive bonding or nailing and is thus troublesome. In addition, once the woody flooring member Aa is laid out, it cannot be easily replaced with another. Further, since a large number of grooves b cannot be formed in the woody base plate 1a with high-precision, the woody base plate 1a has problems from the standpoints of fabrication and function as well. As shown in FIG. 5, woody flooring members Aa and Aa are connected together by fitting the fitting projections 3a formed on one side of one woody base member 1a into the fitting concave portions 4a formed on the other side of the other woody base member 1a, and when this connection is performed, the fitting concave portions 4a are filled with an adhesive d, for the prevention of disengagement. Where

the adhesive d is used, it may come out of the concave portions at the time of the fitting operation, and the residual adhesive has to be wiped away.

[Problems To Be Solved by the Invention]

The present invention has been made in an effort to solve the problems described above, and the object of the present invention is to provide a flooring member which is to be laid out and which enables: the base member has sufficient flexure and plasticity and has compatibility with the underfloor base, the surface of the woody decorative panel hardly cracks, the problems related to the strength and the surface design do not occur, the layout operation is performed on the underfloor base without performing adhesive bonding or nailing, the suppression of vibration and the insulation of sound are performed, a remarkably improved productivity is ensured, and the connecting operation can be easily performed in a short time.

[Means for Solving the Problems]

The present invention provides a flooring member which is to be laid out on an underfloor base and which is characterized in that: a thin woody decorative panel 2 is laminated on the surface of a flexible sheet-like base member 1; fitting projections 3 are formed on one side of the base member 1; fitting concave portions 4 into which

the fitting projections 3 can be fitted are formed on the other side; disengagement-preventing projections 3a are provided for either the fitting projections 3 or the fitting concave portions 4; and disengagement-preventing concave portions 4a into which the disengagement-preventing projections 3a are inserted for preventing disengagement are provided for the other ones.

[Operation]

As described above, a thin woody decorative panel 2 is laminated on the surface of a flexible sheet-like base member 1. With this structure, the flexible sheet-like base member 1 does not warp, unlike the woody base plate. The base member 1 is provided with plasticity and flexure, so that it has compatibility with the underfloor base. Since the base member 1 absorbs the roughness of the underfloor base and can be set in tight contact with the underfloor base, the flooring member A is prevented from sliding. Accordingly, the flooring member A can be easily laid out directly on the underfloor base without the necessity of performing adhesive bonding or nailing. Due to the flexible sheet-like base member 1, the propagation of vibration can be suppressed, and the sound insulation effect is improved. Since special measures need not be taken for the grooves, the productivity is enhanced. Where the base member 1 is made of a molding, the desired

dimensions can be attained by selectively using a suitable resin, and the coupling sections used for coupling adjacent flooring members can be easily fabricated. Hence, the cost reduction can be attained, and a variety of values can be added. In addition, the fitting projections 3 are formed on one side of the base member 1, while the fitting concave portions 4 into which the fitting projections 3 can be fitted are formed on the other side of the base member 1. Moreover, disengagement-preventing projections 3a are provided for either the fitting projections 3 or the fitting concave portions 4, while disengagement-preventing concave portions 4a into which the disengagement-preventing projections 3a are inserted for preventing disengagement are provided for the other ones. With this structure, when the fitting projections 3 are fitted into the fitting concave portions 4, and the disengagement-preventing projections 3a are inserted into the disengagement-preventing concave portions 4a, the flooring members A, A can be coupled together easily and in a short time, with no need to use an adhesive. Further, the structure for this coupling can be easily attained.

[Embodiment]

An embodiment of the preset invention will now be described in detail with reference to the accompanying drawings.

A woody decorative panel 2, which is like a sliced veneer obtained by slicing wood and having a grain pattern, is laminated on the surface of a sheet-like base member 1 which is flexible and formed of a synthetic resin. Fitting projections 3 are formed on one side of the base member 1, while fitting concave portions 4 are formed on the other side. The fitting projections 3 and the fitting concave portions 4 are formed simultaneous with the fabrication of the base member 1. The woody decorative panel 2 may be a sliced veneer which is about 0.25-0.6 mm in thickness and which is lined with a dry lauan veneer of about 1 mm to 2 mm. Alternatively, the woody decorative panel 2 may be a sliced veneer which is about 1-3 mm in thickness. This woody decorative panel 2 is laminated and adhered to the base member 1, which is made of a synthetic resin molding. The woody decorative panel 2 is laminated and joined when the base member 1 is molded, or adhered thereto independently of the molding operation of the base member 1. As the base member 1, it is preferable to employ a sound-insulating sheet which contains metallic powder, for example, and which is improved in sound isolation or sound insulation characteristics.

As described above, the thin woody decorative panel 2 is laminated on the surface of the flexible sheet-like base member 1. With this structure, the flexible sheet-like

base member 1 does not warp unlike the wooden base plate. Due to the flexibility, the base member 1 is reliably compatible with the surface of the underfloor base. Since it absorbs the roughness of the underfloor base and can be set in tight contact with the underfloor base, the flooring member A is prevented from sliding. Accordingly, the flooring member A can be easily laid out directly on the underfloor base without the necessity of performing adhesive bonding or nailing. Due to the flexible sheet-like base member 1, the propagation of vibration can be suppressed, and the sound insulation effect is improved. Since special measures need not be taken for the grooves, the productivity is enhanced. In addition, since the base member 1 is made of a molding, the desired dimensions can be attained by selectively using a suitable resin, and the coupling sections (such as the fitting projections 3 and fitting concave portions 4) used for coupling adjacent flooring members can be easily fabricated.

As shown in FIG. 1, the disengagement-preventing projections 3a are provided for the fitting projections 3, and the disengagement-preventing concave portions 4a into which the disengagement-preventing projections 3a are inserted for preventing disengagement are provided for the disengagement-preventing concave portions 4a. With this structure, when the fitting projections 3 are fitted into

the fitting concave portions 4, and the disengagement-preventing projections 3a are engaged with the disengagement-preventing concave portions 4a, the flooring members A, A can be coupled together easily and in a short time, with no need to use an adhesive. In this manner, the flooring members A, A can be easily laid out, and the structure for coupling them can be easily attained. At the time of coupling, the lower piece 4b of the fitting concave portion 4 is elastically deformed downward in accordance with the fitting movement of the fitting projection 3. After the fitting projection 3 is completely fitted in, the lower piece 4b moves back to the original position, thus ensuring reliable prevention of disengagement. The flooring members are moved in the cut-end direction for layout by sliding them in the direction of arrow (□) in FIGS. 2 and 3. In FIG. 3, the direction indicated by arrow (↑) represents the fitting direction in which the fitting projection 3 is fitted into the fitting concave portion 4.

[Advantages of the Invention]

As can be seen from the above, according to the present invention, a thin woody decorative panel is laminated on the surface of a flexible sheet-like base member. With this structure, the flexible sheet-like base member does not warp, unlike the woody base plate. The base member is provided with plasticity and flexure, so



that it has compatibility with the underfloor base. Since the base member absorbs the roughness of the underfloor base and can be set in tight contact with the underfloor base, the flooring member is prevented from sliding. Accordingly, the flooring member can be easily laid out directly (directly layout) on the underfloor base without the necessity of performing adhesive bonding or nailing. Due to the flexible sheet-like base member, the propagation of vibration can be suppressed, and the sound insulation effect is improved. Since special measures need not be taken for the grooves, the productivity is enhanced. Where the base member is made of a molding, the desired dimensions can be attained by selectively using a suitable resin, and the coupling sections used for coupling adjacent flooring members can be easily fabricated. Hence, the cost reduction can be attained, and a variety of values can be added. In addition, the fitting projections are formed on one side of the base member, while the fitting concave portions into which the fitting projections can be fitted are formed on the other side of the base member. Moreover, disengagement-preventing projections are provided for either the fitting projections or the fitting concave portions, while disengagement-preventing concave portions into which the disengagement-preventing projections are inserted for preventing disengagement are provided for the

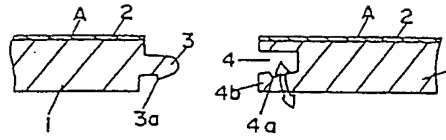
other ones. With this structure, when the fitting projections are fitted into the fitting concave portions, and the disengagement-preventing projections are engaged with the disengagement-preventing concave portions, the flooring members can be coupled together easily and in a short time, with no need to use an adhesive. In this manner, the flooring members can be easily laid out, and the structure for coupling them can be easily attained.

#### 4. Brief Description of the Drawings

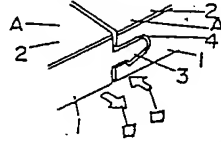
FIG. 1 is a sectional view showing a coupling operation according to one embodiment of the present invention. FIG. 2 is a sectional view showing the coupled state according to the embodiment. FIG. 3 is a plan view showing the layout manner according to the embodiment. FIG. 4 is a sectional view showing the prior art. FIG. 5 is a perspective view showing the coupling operation according to the prior art. Numeral 1 denotes a base member, 2 denotes a woody decorative plate, 3 denotes a fitting projection, 3a denotes a disengagement-preventing projection, 4 denotes a fitting concave portion, and 4a denotes a disengagement-preventing concave portion.

- 1 基材
- 2 木質化粧板
- 3 嵌合突起部
- 3a 嵌止の突部
- 4 嵌合凹所
- 4a 嵌止の凹所

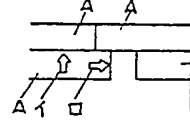
第1図



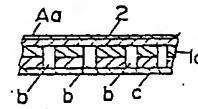
第2図



第3図



第4図



第5図

